

The Cost and Quality of Family Child Care in Maine

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Significance and Overview of Study

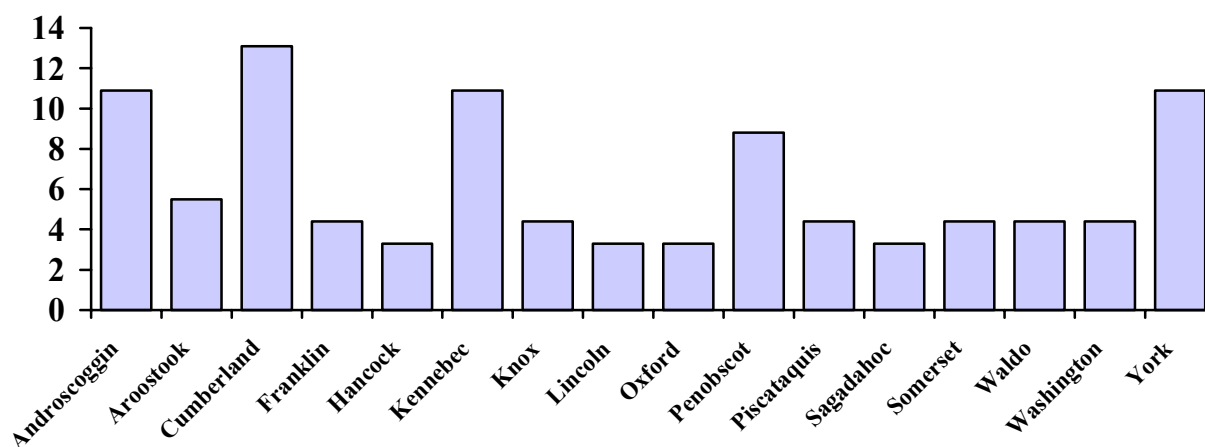
Over the last 30 years, there has been an enormous increase in the rate at which mothers with young children enter the labor force. By 1996, two-thirds of the nation's preschoolers had mothers who were employed (Kids Count, 1998). As a result, early child care has become an important family and societal resource. While there is a fair amount of research examining issues related to child care, much of this research has focused on center care, particularly center care for preschool-aged children (c.f. Clarke-Stewart, 1991).

Many children, however, are not cared for in child care centers. Instead, they are cared for by relatives, friends or neighbors, or in a family child care setting. In 1999, 14% of children under five with employed parents were in family child care (Sonenstein, Gates, Schmidt, Bolshun, 2002). While the proportion of young children in family child care has declined as the availability of center-based care has increased (Casper 1996), family child care continues to be an important source of early child care, especially for infants and toddlers (NICHD 1997). In addition, with the enactment of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996, some states and communities are seeking to increase the availability of child care for low-income families by increasing the numbers of family child care providers.

Over the past decade, researchers and advocates have begun to examine family child care homes in greater detail. The present report adds to the field by providing current information on workforce issues, the quality of early care and education in family child care homes, and the costs associated with licensed family child care homes, based on a random sample of 90 licensed family child care homes in Maine. This report does not include unregulated or unlicensed home-based care.

Study Design and Methods

Study Design. We drew a random sample of licensed family child care homes (FCCHs) from the Maine Office of Child Care and Head Start (OCCHS) licensing lists for the sixteen counties in Maine. FCCHs were drawn from across the state, proportional to each county's share of the OCCHS-licensed homes. Due to the rural nature of some of the counties, we set a minimum goal of three FCCHs sampled per county. Seventy-nine percent (79%) of eligible FCCHs, or 90 licensed family child care homes, agreed to participate in the study. This is higher than the response rates for other studies of family child care providers. This report includes data from all 90 licensed family child care homes from all regions of the state, and serving a variety of children and their families. All data were collected in 2002-2003. Figure 1 shows the proportion of the final sample in each of the sixteen counties.

Figure 1. Proportion of FCCH Sample by County

Once a FCCH was recruited, providers were sent a brief survey to complete at their convenience, prior to the observation. The survey focused on characteristics of the FCCH, such as number of children in care, hours of operation, accreditation status, organization participation, provider education, provider motivations, working conditions and provider training. Specially-trained data collectors observed family child care homes for three to four hours, starting in the morning. Observations were conducted on a day that was convenient for the providers and that was typical of the usual care environment for that provider (i.e., not on a day when a field trip was planned, nor when the children or the regular provider was sick). After the observation, data collectors interviewed providers to gather detailed information on their income and expenses, size of their home and space utilized for child care.

Executive Summary

Family child care is an important source of early care and education for America's families; nationally, 14% of children under five were cared for in family child care homes in 1999. This report contributes to the growing body of information about family child care, with a focus on workforce issues, the quality of care and the costs associated with providing family child care. In this study of 90 licensed Maine providers, we found:

Workforce Issues for Family Child Care Providers

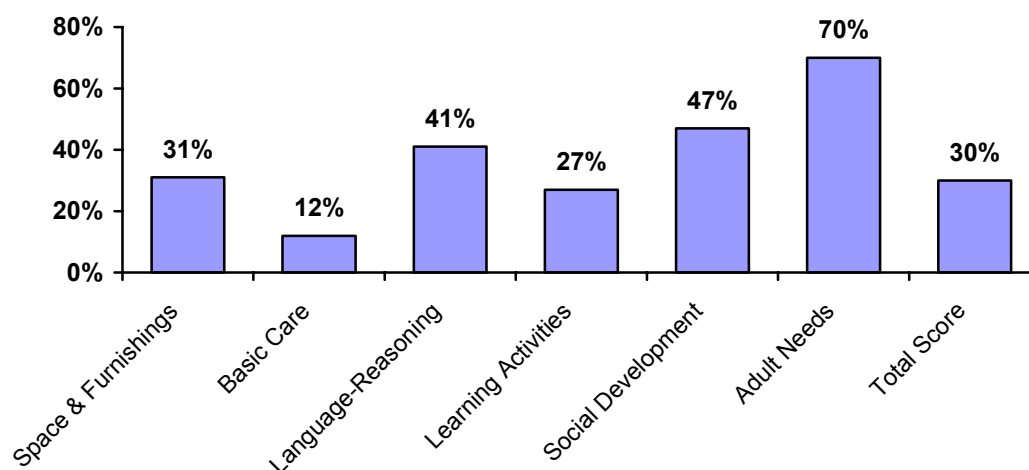
- The majority of the providers (77%) had at least one of their own children living at home. In fact, 40% of providers had one or more children under the age of 10 who was at home at the same time that the provider was caring for family child care children.
- The majority of the women became family child care providers because it combined something they enjoy and at which they were competent, with the opportunity to manage their parenting responsibilities in the way they wanted. At the same time, working as a family child care provider met economic goals; 80% of providers said that adding to family income was a very important reason for becoming a provider.
- Almost half of the providers contributed at least 50% of their household income from their family child care business.
- The most stressful aspect of licensed providers' work was the fact that their earnings were unpredictable.
- Providers spent an average of 50 hours a week directly caring for children, plus an additional 10 hours a week, on average, on tasks related to their family child care business (such as doing laundry, food shopping, and record-keeping).
- More than one third (44%) of licensed providers expected to stop caring for children within the next five years. Most of the providers expected that their next job would not be in early child care and education.
- Providers said they would be more likely to continue as licensed providers if they received retirement savings, better pay, health benefits and greater respect for the work they do.
- Almost half of the providers also wanted shorter hours and respite care or a trusted substitute to give them time-off.

Quality of Early Care and Education in Family Child Care Homes

- Providers' goals corresponded to the indicators of quality that were used in this study, and included: Safety & Basic Care; Warmth & Sensitivity of Relationships; Learning & Stimulation; and Meeting the Needs of Parents & Providers.
- Maine is comparable to other states in the proportion of homes that meet the standards for high quality early care and education, but has slightly more homes that are judged inadequate.

- While Maine is comparable to other states, there is room for improvement in the quality of the experiences offered to young children in Maine family child care homes, as there was in the full-day centers in our earlier report, and in child care settings around the country. Only 30% of Maine’s family child care homes met the Good benchmark for quality¹.
- The majority of licensed family child care homes in this study met or exceeded the established Good benchmark on Parents’ and Providers’ Needs: parents and providers communicated well with each other, and the provider was able to balance her responsibilities as a provider with other requirements on her time and attention.
- While keeping children safe and healthy was one of the most important goals for licensed providers, 62% of providers failed to meet the Minimal benchmark in Basic Care – they did not always wash their hands after diapering or toileting of children, did not ensure that children washed their hands for meals or after using the bathroom, did not keep the kitchen area and toys disinfected, and did not adequately childproof their home from common hazards. These areas can be readily improved at little or no expense.

Figure 2: Percent FCCHs Meeting Good Benchmark



- Almost half of the family child care providers consistently had warm and sensitive relationships with the children in their care; 46% of providers usually met the Global Caregiving Standards. Providers were also likely to meet the Good benchmark for two items on the FDCRS Social Development scale – the warmth and affection in their relationship with the children, and the use of non-physical forms of discipline. However, family child care providers were less likely to provide the cultural awareness that at least half of providers believed is an important goal for children.
- Forty-one percent of licensed family child care homes met or exceeded the Good Benchmark on Language & Reasoning Development; this is comparable to full-day

¹ The benchmarks used in this study are part of the Family Day Care Rating Scale (FDCRS), a widely-used measure of the quality of family child care homes. See the body of the report for more detailed information and references.

centers (Marshall, Creps, Burstein, et al. 2004). However, in both settings, the majority of providers did not provide the kind of stimulation that has been found to be important to children's later success in school.

Characteristics Related to the Quality of Licensed Family Child Care Homes

- Providers with formal education in the field (an Associates degree or higher) were more than 3 times as likely than providers without any training in the field to meet the Good benchmark on the overall FDCRS score.
- Providers who have taken one or more workshops, held a credential such as a CDA or had taken one or more college courses in the field were 2.5 times as likely to meet the Good benchmark on the overall FDCRS score than providers without training.

The Cost of Early Care and Education in Licensed Family Child Care Homes

- The largest portion of revenues (an average of 66% across all homes) came in the form of parent fees.
- Subsidies played a significant role among providers serving predominantly low-income families, providing over a third of revenues, whereas parent fees were the most dominant source of revenue among other providers.
- Providers spent an average of \$13,662 on out-of-pocket expenditures, including food, paid assistants, children's supplies, office and household supplies.
- Providers' net revenues, after deducting out-of-pocket expenses, were \$20,537 per year. After deducting the estimated costs of using their own homes for their business, providers' net revenues were \$15,692 per year, or \$5.66 per hour, in 2002 dollars.
- When considering the full costs of licensed family child care, we examined costs borne by third parties, such as donations or administrative fees associated with subsidies. These costs had only a slight impact on the total cost of family child care in Maine.

Conclusion

Taken together, these results suggest that policies and programs that encourage continuing education or training for providers in the field of early childhood education or child development may raise the quality of licensed family child care homes in Maine. However, the workforce issues raised in this study require that any policy designed to address quality issues must also address affordability issues and the working conditions of licensed family child care providers. Subsidies are particularly important to family child care homes that serve the children of low-income families.

The Family Child Care Workforce in Maine

Regulated family child care homes have much in common with other forms of self-employment and other home-based businesses. Family child care providers are generally responsible for all aspects of the business, including finances, planning and service delivery. Providers also often operate with little, if any, external support. Unlike other small business proprietors, however, providers have both a business relationship and a caring relationship with the families whose children are in their care, making it more difficult to set and collect fees (Center for the Child Care Workforce 1999). Finally, the major expense for a family child care home, the provider's labor, is often a hidden or undervalued expense (Modigliani 1994).

Who Are The Family Child Care Providers?

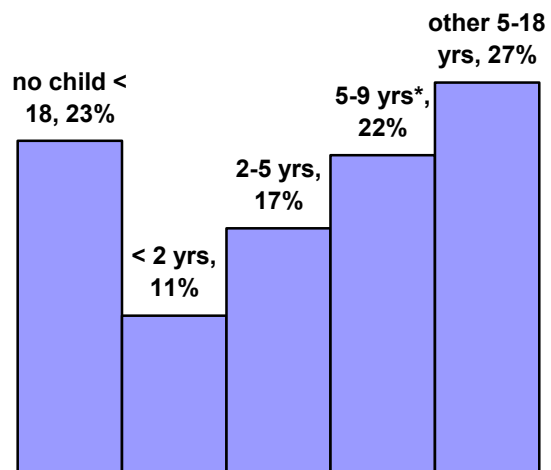
While both women and men can become licensed family child care providers, national data indicates that most providers are women, and the vast majority of providers who participated in this study were women. Over half the providers in this study were in their 30's or 40's. All of the providers spoke English; only 2 out of 90 providers spoke a second language (French).

The income that providers earned from their family child care business provided important support for their households. Almost half of the providers (45%) contributed at least 50% of their household income from their family child care business.

The majority of the providers (77%) had at least one child at home. Figure 3 presents non-duplicated counts of children's ages. More than one in ten providers (11%) had an infant or toddler under the age of two years old. An additional 17% had one or more children between the ages of two and five years. In total, then, 28% of providers had one or more own children under the age of five years; these providers may also have had older children living at home.

In addition to these providers, 22% of providers had a child between the ages of five and nine who was at home, *for at least 3 hours in a row*² at the same time as the family child care children;

Figure 3: Presence of Provider's Own Children



* 5-9 year olds who are present at least 3 hours in a row

² Not counting school vacations, holidays, sick days, etc.

these providers did not have a child under five, but did have their own school-age child at home for a significant portion of the time that family child care children were present.

All told, 40% of providers had one or more children under the age of 10 who was at home at the same time that the provider cared for family child care children (22% with a child under the age of five, and 28% with only children ages 5-9, present for at least 3 hours in a row).

However, this still underestimates the involvement of providers with their own children in need of parenting. Another 27% of the providers had a child between the ages of 5 and 9 years who was not home for 3 hours in a row, or had a child between the ages of 10 and 18 – while the provider was not providing physical care for these children while the family child care children were present, she still had parental responsibilities for these school-age children.

Working Conditions for Providers

Over 90% of family child care homes were open five days a week, with only 3% open part-week, and 2% open more than five days a week. Most providers worked on their own, although 29% of family child care homes had an assistant. Providers spent an average of 50 hours a week directly caring for children, plus close to 10 hours (mean = 9.59; sd = 5.76) per week on other child care-related tasks (such as doing laundry, food shopping, and record-keeping).

The average provider cared for six children at a time. Over the course of the week, the average provider cared for a total of ten different children (mean = 10.48, sd = 4.37), including children in care part-time. However, homes varied considerably; 7% of homes cared for 1 to 5 children, another 19 % of homes cared for 6 to 7 children over the course of the week. Approximately one-third of the providers cared for 8 to 10 children, 14% of providers cared for 11 to 12 children, 17% of providers cared for 13 to 15 children and 11% of providers regularly cared for over 16 children.

Time Off, Health Insurance and Retirement Benefits. Most family child care homes were closed at least 8 days out of the year for holidays or vacation days. Very few homes closed so that providers could attend training events. In addition, on average, family child care homes were closed only 1 day per year because the provider was ill.

About 7% of Maine family child care providers reported that they did not have health insurance of any kind. Among the providers who received assistance with health care costs, 70% were covered at least partially by their spouse's/partner's health insurance. Another 12% were covered at least partially by Medicaid. About three-quarters (73%) of providers reported that they contribute to Social Security for themselves, and 21% had set aside savings for retirement in the previous year.

Job Experiences. Providers were asked to rate different characteristics of their jobs and to report the extent to which these characteristics were rewarding or stressful (see Tables 1 and 2). The most rewarding aspect of their jobs was the opportunity to do work that the providers considered important.

Table 1: Rewards of Being a Family Child Care Provider

Job Characteristics	True	If true, how rewarding is it for you?		
		Not rewarding	Somewhat rewarding	Very rewarding
You are doing work you consider important	100%	1%	16%	83%
Your job involves helping others	99%	1%	23%	76%
Your job fits your skills	98%	1%	30%	69%
You get a sense of accomplishment or competence from doing your job	95%	2%	30%	68%
Your work contributes to the good of the community	94%	1%	31%	68%
Your work is challenging	98%	1%	40%	59%
You are able to work on your own	97%	2%	22%	75%
You can learn new things on your job	97%	2%	35%	63%
You are doing work that others respect	73%	5%	40%	56%
You have a variety of tasks	99%	3%	52%	44%

Table 2: Stressful Job Characteristics

Job Characteristics	True	If true, how stressful is it for you?		
		Not stressful	Somewhat stressful	Very stressful
Your earnings are unpredictable, and can go down unexpectedly	85%	8%	36%	57%
You have to juggle conflicting tasks or duties	82%	18%	61%	21%
You have too much to do	56%	12%	65%	22%
The job takes too much out of you	67%	--	80%	20%
You have deadlines to meet	50%	30%	59%	11%
There are no opportunities for advancement, or to get ahead, on your job	51%	39%	48%	14%
You do not have the skills you need to do your job	13%	27%	73%	--

Almost eight out of every nine providers (85%) reported that their earnings were unpredictable and could go down unexpectedly – this was the most stressful aspect of their jobs. A similar proportion of providers reported that they had to juggle conflicting tasks or duties, and, for most providers, this was somewhat or very stressful. More than half reported that they had too much to do and that the job took too much out of them--most found this somewhat or very stressful. Only 13% of providers felt that they did not have the skills they needed to do their jobs.

Motivation to Become a Provider

Providers were given a list of eighteen reasons other providers have given for becoming providers and were asked how important each of these reasons was for them (see Table 3). The most important reasons, endorsed by the greatest number of providers, were “because you like children,” “to be home with your own children,” and “to add to the family income.”

These women became family child care providers because it combined something they enjoyed and at which they were competent, with the opportunity to manage their parenting responsibilities in the way they wanted. At the same time, working as a family child care provider met economic goals; 80% of providers said that adding to family income was a very important reason for becoming a provider.

Table 3: Reasons Respondents Became Family Child Care Providers

<i>Reasons</i>	<i>Rank</i>	<i>Very Important</i>	<i>Important</i>	<i>Not Important or Somewhat Important</i>
<i>Intrinsic Characteristics of the Job:</i>				
Because you like children	1	85%	13%	1%
Because you're good at caring for children	4	75%	19%	6%
Because child care is important work	6	71%	18%	10%
To be able to work with children	7	62%	30%	8%
To be your own boss	8	48%	27%	25%
To be able to raise children the way you think they should be raised	9	44%	22%	34%
To use your education in child development	11	22%	9%	69%
<i>Family Reasons:</i>				
To be home with your own children	2	83%	4%	12%
To be able to work at home	5	74%	16%	9%
To help out your daughter, son, sister, or other relative	14	9%	6%	85%
To work part time	16	5%	8%	87%
<i>Economic Reasons:</i>				
To add to family income	3	80%	12%	7%
To have a secure job	10	41%	23%	36%
To explore new career direction	13	13%	16%	72%
Because it pays well	12	14%	16%	70%
To have a job in the U.S.	15	8%	3%	88%
Because you were frustrated with your other jobs	17	4%	11%	86%
Because this was the only job you could find	18	1%	2%	96%

For some women, becoming a provider was also a chance to be their own boss, an exploration of new career directions, a response to frustrations with other jobs or an answer to fears of insecure employment. However, for most women, the choice of this particular type of income-generating activity seemed to be driven by an interest in this type of work, the belief that they were competent caregivers, and the desire to find work that allowed them to be home with their children as well.

Tenure and Retention

Just fewer than half (46%) of providers had been licensed within the previous five years. Around one in five (21%) of providers had been licensed for 6 to 10 years and one third (33%) of providers had been licensed for more than 10 years.

Most (86%) of the providers in the study expected to continue to do so through the following 12 months; however, almost half (44%) of the providers expected to stop caring for children in their home within the next five years. Another 30% expected to stop within the next six to nine years, while 14% expected to continue caring for children for 11 to 15 years and 10% anticipated caring for children for more than 15 years. Because the study only included providers who had been active for at least nine months, these data do not include providers who were in business for less than nine months.

Providers were asked what they would do next, if they were to stop providing family child care (see Table 4). While 22% of providers would stay in the field of early care and education, almost one in five would seek employment in the public schools and 30% would take a job or return to school in another field.

Table 4: If you were not a provider, what would you do next?

	Item %	Category %
Stay in the field:		22%
Work in a child care center or preschool	9%	
Open your own child care center or preschool	3%	
Go back to school in a field related to child care	10%	
Work with children:		32%
Do something else with young children, but not child care	13%	
Take a position in a school	19%	
Leave the Field:		30%
Take a job outside of the child care and education field	21%	
Go back to school in a field unrelated to child care	9%	
Stay at home full time		12%
Other		2%

When asked whether anything could make them want to continue to offer child care for a longer time, the most likely inducement was retirement benefits, followed closely by better pay, health benefits and greater respect for the work they do (see Table 5). Support services, such as respite care or local resources, were important to about a half of the providers, but not as important as increased financial rewards.

Table 5: Factors very likely to make providers want to offer child care for a longer time.

Retirement savings	70%
Better pay	69%
Health benefits	67%
More respect for the work you do	56%
Shorter hours	49%
Respite care, or a trusted substitute to give you time off	48%
More local services and resources to help you run your family business	41%
More contact with other providers	20%

Organizational Membership

About one-half (51%) of the providers reported having contact with their local Resource and Development Centers; 43% of the study providers belonged to Maine Roads to Quality. Providers also belonged to local provider or business groups (27%) and the Maine Family Child Care Association (18%). Three percent of the providers were currently participating in Home Start; 4% were members of the National Association for the Education of Young Children (NAEYC) and 10% were members of the National Association for Family Child Care (NAFCC). However, these figures may over-state the involvement of the broader population of Maine's family child care providers in organizations, since providers who are connected to such groups might have been more willing to participate in this study.

The providers reported that these organizations provided a range of services. The most common service reported was training: 90% of providers who belonged to organizations received some form of training through these professional groups and 73% of providers reported receiving referrals of families needing care. About a quarter (26%) of the providers reported that the organizations helped them manage their family child care business, and almost as many reported that the organizations provided advocacy with policy or state reimbursement (24%).

Summary

The women in this study became family child care providers because it combined something they enjoyed and at which they were competent, with the opportunity to manage their parenting responsibilities in the way they wanted. Over two-thirds of providers had one or more children of their own at home; 40% of providers cared for their own children under the age of 10 at the same time that they provided care for family child care children. At the same time, working as a family child care provider met economic goals: 80% of providers said that adding to family income was a very important reason for becoming a provider.

The vast majority of licensed providers reported doing this kind of work because they liked children. They reported that the most rewarding aspects of their jobs was doing work they considered important and that had an impact on people's lives. Providers spent an average of 50 hours a week directly caring for children, plus an additional 10

hours a week, on average, on tasks related to their family child care business (such as doing laundry, food shopping, and record-keeping). The most stressful aspect of licensed providers' work was the fact that their earnings were unpredictable and that they often had to juggle conflicting tasks or duties.

Over forty percent of licensed providers expected to stop caring for children within the next five years; most of the providers expected that their next job will not be in early child care and education. Providers said they would be more likely to continue as licensed providers if they received retirement savings, better pay, health benefits and greater respect for the work they do. Support services, such as respite care or local resources were important to about half of the providers, but not as important as increased financial rewards.

The Quality of the Early Care and Education Children Receive in Family Child Care Homes

While there is considerable agreement among parents, providers and advocates about the meaning of quality in center-based care for children ages 3-5, there is less agreement about the meaning of quality in family child care homes. Some advocate for quality standards that are analogous to those set for centers; others argue that family child care homes are meant to be more like family care, and less like center care. This discussion is part of a larger debate in the United States about the perceived split between education and care. However, Galinsky and colleagues (1995) point out that these two goals are not mutually exclusive. What matters most to children's preparation for school are a warm and responsive provider/teacher, whether activities and interactions are developmentally-appropriate, that is, fitting the way children learn, and whether the interactions between adult and child, and among children in the setting, promote the development of healthy social skills (c.f., NICHD ECCRN 1998, 2001).

Defining Quality

Traditionally, when we speak of the quality of early care and education, we measure quality either structurally (the number of children in the group, the training of the provider), or as process (the responsiveness of the provider, the stimulation provided to the child). These standards have been based on best-practices in the field and an extensive body of research. However, much of the development of standards has been informed by experiences and research on *center-based* early care and education (the standards developed by the National Association for Family Child Care are an important exception to this). While the existing standards are a useful yardstick, we begin this section on quality by reporting on providers' goals for the children in their care, and then compare their goals to commonly-used measures of quality for FCCHs, described below.

Providers' Goals for Children

In a study of family child care and relative care, Galinsky and colleagues (1994) found that providers and parents shared certain goals for the children. The most important of these goals were safety, communication between providers and parents, cleanliness, and the quality of the relationship between provider and child. In the current study, we also asked providers to evaluate a set of goals that were developed based on prior studies.

Maine providers reported that their most important goals for children were to provide a safe physical environment, to make the child feel loved, to give children a home away from home, and to help the child to learn and grow (see Table 6). In addition, providers wanted to teach children to get along with others and encourage the child to like him/herself. About two-thirds of providers valued their role in making it possible for parents or guardians to be employed.

Table 6: Providers Goals for Children

<i>As a provider, I want to:</i>	<i>Very Important</i>	<i>Important</i>	<i>Somewhat Important</i>	<i>Not Important</i>
Provide a safe physical environment	92%	8%	0	0
Make the child feel loved	91%	9%	0	0
Give the child a home away from home	88%	8%	2%	2%
Help the child to learn and grow	83%	16%	1%	0
Help child learn to get along with other children	76%	23%	1%	0
Encourage the child to like him/herself	75%	24%	2%	0
Make it possible for the parent or guardian to work	65%	18%	9%	8%
Provide fun activities	63%	34%	3%	0
Teach the child about the world	49%	27%	16%	8%
Prepare the child for school	44%	32%	18%	6%
Help the child appreciate other ethnic and cultural groups	39%	28%	23%	10%
Teach the child an appreciation for her/his own culture, religion, or family background	30%	28%	23%	19%
Provide religious instruction	6%	5%	22%	68%

Measuring Quality of Care

The quality of care is measured in many different ways. Studies have often relied on structural characteristics, such as group size, adult-child ratios and caregiver education and experience. While structural characteristics, such as group size, tell us something about children's experiences in family child care homes, process quality tells us more about what actually happens in the care environment – how stimulating an environment it is, how providers and children interact, what the materials and physical space are like, how safe it is. These are the same aspects of the family child care home that providers believe are important for children, as reflected in their goals discussed in the previous section.

The Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989) is a commonly used measure of process quality that provides benchmarks for different levels of quality. Each family child care home was observed by a trained observer and scored on these benchmarks. The benchmarks are labeled 1 = inadequate care, 3 = minimally adequate care, 5 = good care and 7 = excellent care. The FDCRS consists of six different scales, each of which measures a specific aspect of the family child care home environment. In addition, we observed the extent to which the providers' interactions with the children

were responsive to the children's needs, using the Global Caregiving Rating Scale (Arnett, 1989). This scale consists of 26 items that address sensitivity, harshness, detachment and permissiveness; the items are rated on a four-point scale from "not at all characteristic of the caregiver" to "very much characteristic" and are based on the entire observation period. See Appendix A for additional details on these measures.

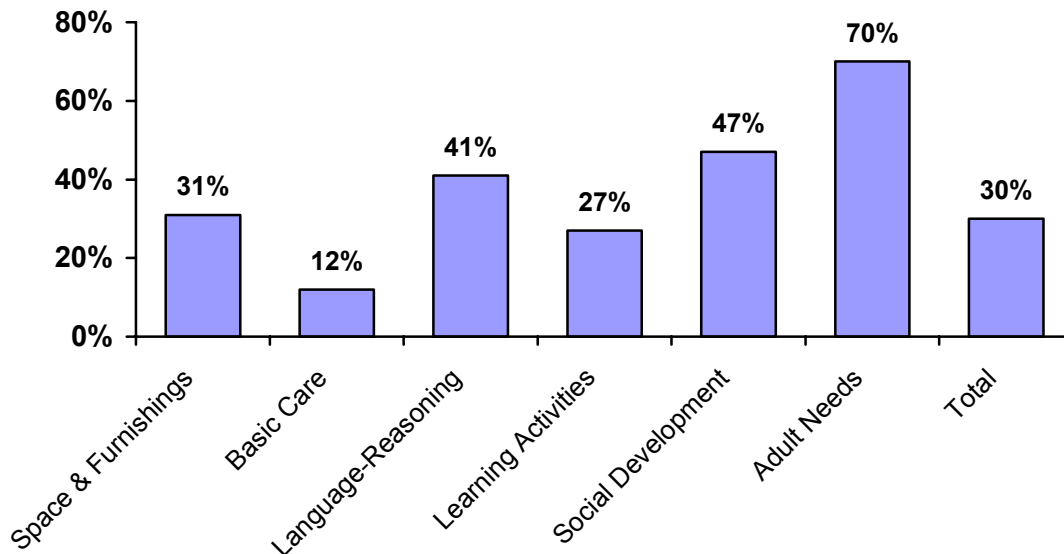
Comparing Providers' Goals to Common Measures of Quality

The providers' goals can be grouped into four general areas: Safety & Basic Care; Warmth & Sensitivity of Relationships; Learning & Stimulation; and the Needs of Parents & Providers. The observational measures of process quality that we used in this study correspond to the providers' goals in those general areas. Table 7 summarizes the providers' goals (from Table 6) and the related process quality measures used in this study.

Table 7: Links between Providers' Goals and Process Measures		
General Concept	Providers' Goals	Process Measures
Safety & Basic Care	Provide a safe physical environment	Basic Care; Space & Furnishings
Warmth & Sensitivity of Relationships	Make child feel loved; Encourage child to like self; Help children learn to get along with other children	Social Development; Global Caregiving Ratings Scale
Learning & Stimulation	Help the child to learn and grow; Provide fun activities; Teach the child about the world; Prepare the child for school	Language-Reasoning; Learning Activities
Needs of Parents & Providers	Make it possible for parent/guardian to work; To be home with own children (from Table 3)	Adult Needs

The Quality of Maine Family Child Care Homes

While 30% of the FCCHs in the sample had total scores of five or six, thereby meeting or exceeding the Good benchmark, the majority did not (see Figure 4). Fifty-six percent had a total score of three or four, indicating less than good quality care, and 14% had a total score below three, the Minimal benchmark. It is only on the Adult Needs subscale that the majority of FCCHs met or surpassed the Good Benchmark. On all other subscales, less than half the FCCHs met the Good benchmark. What do these findings mean? We examine each of these scales in greater detail in the following sections.

Figure 4: Percent FCCHs Meeting Good Benchmark

Safety and Basic Care

Almost every provider said that it was very important to provide a safe physical environment for the children. The FDCRS includes two scales that address this goal: Space & Furnishings and Basic Care.

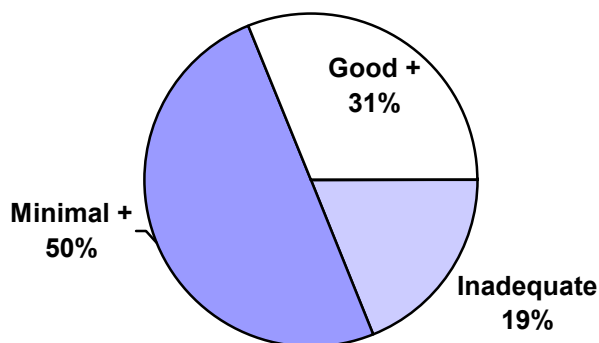
Space and Furnishings. The Space and Furnishings scale is a measure of the physical setting. A family child care home that meets Minimal standards is one in which there is enough space and furniture to meet the basic needs of all children, and it is safe and in good repair. The furnishings and space include at least one piece of soft furniture, some of the children's artwork and a carpeted space in the area used for child care. In addition, there is space appropriate for the ages of the children (crawling space for infants, play space for preschoolers); the space is cleared of breakable objects and other "no-no's" so that children can play with few restrictions. There is also safe outdoor space available and it is used at least three times a week, except in bad weather.

In contrast, in a family child care home that meets the Good benchmark, furniture is made appropriate for the child's size (e.g., adult chairs with cushions used while eating). The furnishings are regularly cleaned (tables washed after eating or art activity), and include more soft furniture and soft stuffed toys. The space is well-arranged (not crowded, traffic patterns do not go through a play area), with two or more clearly-defined play areas appropriate to the ages of the children. In addition, the children are provided with indoor physical activity during bad weather. To meet the Excellent benchmark, family child care homes must meet all of the above, plus there must be some child-sized furniture, displays are at children's eye level and are changed frequently to match their activities and interest. In addition, there are many materials

available for children of different age groups, and additional materials are available to add to or change play areas. Finally, the provider uses the space to plan new and challenging activities each week and also provides opportunities for individual play.

The average score was 4.18 on the Space and Furnishings subscale; 31% of the FCCHs met or surpassed the Good benchmark (5 or higher), and none met the Excellent benchmark (Figure 5). Half the FCCHs only met the standards for minimum quality, and approximately one-fifth did not meet even the Minimal benchmark. While most providers offered children some furnishings for play, soft furniture or carpeted areas, as well as some space to play alone if desired, 41% of providers did not have adequate, *child-proofed* space for young children to crawl or play indoors and 35% of providers did not make adequate outdoor space available for children at least three times a week, when the weather allowed.

Figure 5: Percent of FCCHs Meeting Space & Furnishings Benchmarks

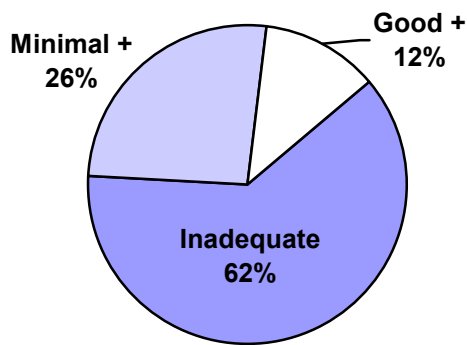


Basic Care. The Basic Care subscale is a measure of the extent to which the care environment meets the basic physical needs of the children, including meals, naps, diapering/toileting, health and safety. An environment that meets Minimal standards has regular routines and well-balanced meals and snacks; the cooking and eating area is clean, and sanitary food preparation standards are met. The diapering/toileting area meets basic sanitary conditions (e.g. diapering area cleaned after each use; caregiver washes hands after helping child with toileting). The setting is clean and safe, and the provider has basic safety and emergency materials available. A setting that meets the Good benchmark goes beyond these basics: the provider organizes and schedules basic care routines (mealtimes, naps) so that children's basic needs are met. The space and equipment promotes self-help and healthy development. In addition, pleasant interactions between the provider and children occur during routine activities. To meet the Excellent benchmark, the provider must encourage age-appropriate self-help skills across a variety of routines and accommodate the needs of individual children. Health information is provided for parents, and the provider models good health habits and teaches safety to children.

The average score was 3.03 on the Basic Care subscale; 12% of the FCCHs met the Good benchmark, and none met the Excellent benchmark (Figure 6). Just over one-fourth of providers met the Minimal standards benchmark but did not meet the Good benchmark.

Of greater concern, the majority of providers failed to meet even the Minimal standards benchmark. While they provided warm, personal greetings to each child, and basic safety and care to the children, they did not use these caregiving activities to foster developmental goals, such as self-help skills. A majority of the providers did not wash their hands after diapering or toileting of children, did not ensure that children washed their hands for meals or after using the bathroom, did not keep kitchen areas and toys disinfected, and did not childproof their home from common hazards. A third of the providers provided inadequate naptimes or little or no supervision during naps.

Figure 6: Percent of FCCHs Meeting Basic Care Benchmarks



Warmth and Sensitivity of Relationships

Almost every provider said that it was very important to make the child feel loved. More than three-quarters of providers also said it was very important to encourage the child to like him- or herself and to help children learn to get along with other children. About half of providers felt that it was important to help the child appreciate their own and other ethnic and cultural groups. The FDCRS includes one scale that addresses this goal: Social Development. In addition, the Global Caregiving Ratings Scale assesses the sensitivity and quality of the provider's relationship with the children. These two measures are strongly linked; by using both measures, we have a stronger picture of the warmth and sensitivity of the relationships between providers and children.

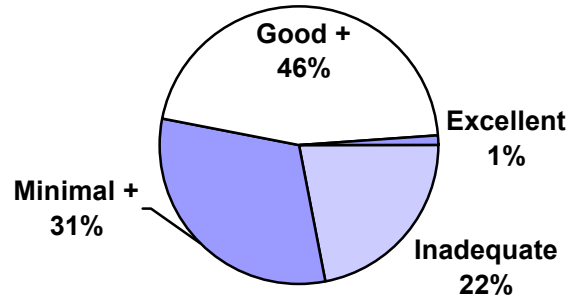
Social Development. The Social Development subscale of the FDCRS is a measure of the quality of interactions between the provider and children, the discipline used in the setting, and the level of cultural awareness evident in the setting. A setting that meets Minimal standards is one in which adult supervision is adequate to keep the children safe; there are some positive interactions between provider and children, although primarily for routine care. Providers do not use physical punishment or harsh discipline styles.

A setting that meets the Good benchmark goes beyond this—the provider seems relaxed and cheerful with the children and uses physical contact to show affection. The provider uses alternatives to physical punishment and praises children for appropriate behavior. The setting demonstrates cultural awareness through examples of racial variety in materials, and children are not limited to gender-traditional activities. In a setting that meets the Excellent benchmark, the children and provider show respect and kindness for one another, the provider anticipates problems and handles them before they become serious, often helping children solve problems through talking. The use of

multicultural and non-traditional role materials is planned by the provider.

The average score was 4.20 on the Social Development subscale; 46% met or exceeded the Good benchmark, an additional 1% met the Excellent benchmark (Figure 7). Just under a third (31%) of the settings met the Minimal standards benchmark, but did not meet the Good benchmark; 22% failed to meet the Minimal standards.

Figure 7: Percent of FCCHs Meeting Social Development Benchmarks



Comparing the three items on this scale, we found that 63% of providers met or exceeded the Good benchmark on setting a warm and caring emotional tone, 49% of providers met or exceeded the Good benchmark on approaches to discipline and positive solutions to problems, but only 5% of providers met or exceeded the Good benchmark on cultural and gender awareness.

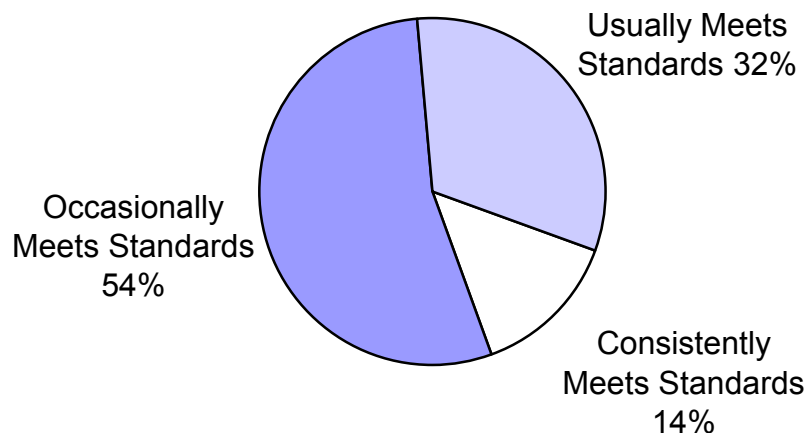
Global Caregiving Rating Scale. The Global Caregiving Rating Scale (Arnett, 1989) rates the caregiver's relationship with the child in terms of overall sensitivity, harshness, detachment and permissiveness. The scale consists of 26 items, rated on a scale from 1=never meets the standard to 4=consistently meets the standard. The total score is the average of the ratings on all 26 items. The Global Caregiving Rating Scale items are scored at the end of the observation period, based on the total observed time.

Almost half of the providers usually or consistently met the standards on the Global Caregiving Rating Scale (see Figure 8). Fourteen percent (14%) of the providers received high marks (a total score between 3.5 and 4); these providers were rated as "Never or rarely critical of the children;" "Usually or consistently listen attentively to the children;" "Usually or consistently seem to enjoy the children;" "Usually or consistently supervise the children appropriately;" and "Usually or consistently talk to children on a level they can understand." Almost a third (32%) of the providers had average scores that fell between 3 and 3.5; they were rated as usually meeting standards, but not meeting consistently a majority of the standards.

None of the providers received a failing score (a total score of 1) on the Global Caregiving Rating Scale. However, 54% of the providers had a score that was lower than a 3, indicating that on most items they were rated as only occasionally meeting the standard.

For example, a provider with a total score below 3 might have been rated as “Is often critical of the children, but there are times when she is not critical;” and “Often does not listen attentively, but there are some moments when she does listen;” and “Usually does not seem to enjoy the children, but there are a few instances of enjoyment;” and “Usually does not supervise the children very closely, but there are times when she does make an effort to keep them in her sight or hearing;” and “Usually does not talk to children on a level appropriate for their developmental level, but in a few instances does talk at a level children understand.”

Figure 8: Percent of FCCHs Meeting Global Caregiving Standards



Learning and Stimulation

Eight out of ten providers said that it was very important to help the children learn and grow; over sixty percent felt it was very important to provide fun activities for children. Over forty percent of the providers felt that it was very important to prepare the child for school and to teach the child about the world. Another 27% - 32% thought it was important to do so. The FDCRS includes two scales that address these goals: Language-Reasoning and Learning Activities.

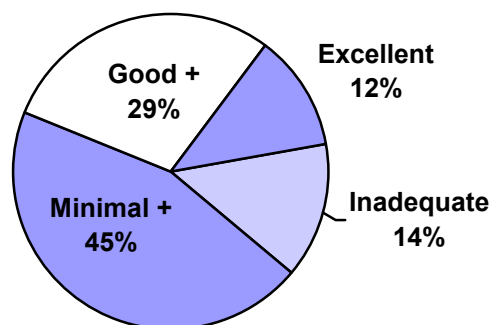
Language-Reasoning. The Language-Reasoning scale is a measure of the use of language in the setting and the opportunities for learning about language that are provided for children. A score below five (Good) on this scale indicates a setting in which there is some social talking and children are generally asked yes/no questions (for younger children, talking is mainly to control behavior). There are some books available for the children, and the provider engages in activities with the books at least three times a week. The setting also has a few other language related materials such as puppets, dramatic play props, or toy telephones, and the provider has a daily activity that encourages language. In addition, children are engaged in a daily activity that promotes reasoning skills.

On the other hand, to meet the Good benchmark, a provider engages in a good deal of social talk with children and encourages children to talk and use language. There are a greater number of books and other language materials, and the provider engages in

daily activities using books. There are multiple activities available daily that encourage language and a wide variety of games and materials that stimulate reasoning skills. In a setting that reaches the Excellent benchmark, the provider engages children in informal conversation throughout the day, asking children more complex questions and encouraging language to solve problems. The provider adds new language-related materials on a monthly basis, and uses language that helps children increase their understanding of language. To develop reasoning skills, the provider has new activities weekly and uses daily experiences as opportunities for learning.

The average score was 4.60 on the Language-Reasoning subscale of the FDCRS; 41% of the providers were rated as Good quality or better on Language-Reasoning, with 12% reaching the Excellent benchmark (Figure 9). However, 14% of FCCHs did not even meet Minimal standards. While most providers provided a language-rich environment, with informal social talking between caregivers and children, providers were less likely to use books and language extensively with infants and toddlers (naming objects, saying nursery rhymes). Similarly, providers with preschoolers were less likely to provide a variety of books and language activities (reading to the children, storytelling) for the preschoolers. About a quarter of providers received an Excellent rating on helping children to reason, most providers did not regularly offer reasoning activities, such as sorting shapes, or ask preschoolers “why” questions to encourage their thinking.

Figure 9: Percent of FCCHs Meeting Language-Reasoning Benchmarks

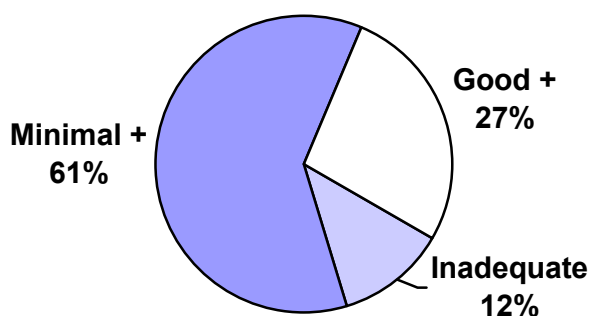


Learning Activities. The Learning Activities subscale is a measure of the types and variety of materials and activities available for the children such as fine motor materials, art, music, sand & water play, dramatic play, blocks, and use of television. This subscale also is a measure of how the daily activities are scheduled and supervised. A score below five (i.e., not meeting the Good benchmark) indicates a setting that is lacking in many of these activities and materials, but a television is on most of the day. There is a daily routine that allows for play activities as well as basic care routines and there is attention to safety and cleanliness. A setting rated as Good provides a greater range of materials and activities, and different activities occur a few times a week. Television use is limited to children’s programs, but alternative activities are available as well. The schedule allows for a variety of play activities, as well as daily special activities. The provider interacts frequently with children and supervises according to individual needs. In a setting rated as Excellent, materials are organized for independent use by children and are rotated to maintain children’s interest, and different activities occur on a daily basis. The television is either not used or the provider makes

it an educational experience by asking questions or adding information. The provider uses routine activities as learning experiences, looks for opportunities to extend children's learning, and organizes activities in such a way as to avoid conflict between children.

The average score on the Learning Activities subscale was 4.26; 27% of the providers had a score of Good or better, 61% were rated between Minimal and Good, 12% were rated as Inadequate (Figure 10). While most providers offered art materials, blocks and dress-up or dramatic play materials, 72% of providers did not offer sand or water play at least once very two weeks, 57% of providers used the TV more than 2 hours a day or as a "babysitter" rather than as an educational experience, and 37% of providers did not adequately supervise the children's play activities and materials.

Figure 10: Percent of FCCHs Meeting Learning Activities Benchmarks



Needs of Parents & Providers

Over 60% of the providers felt that it was very important to make it possible for the parent or guardian to work. In addition, one of the most important reasons providers gave for becoming providers was to be able to earn an income and still be home with their own children. One of the FDCRS scales, Adult Needs, provides a measure of the extent to which the family child care home meets the needs of both parents and providers.

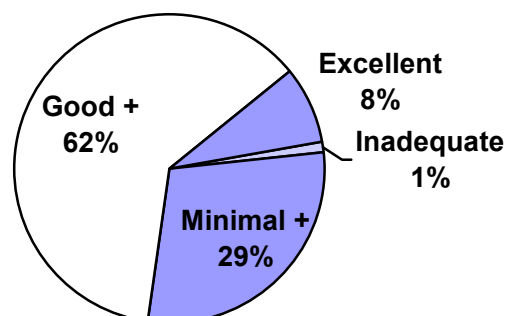
Adult Needs. The Adult Needs scale is a measure of the quality of the relationship between providers and parents, the provider's balance between personal and caregiving responsibilities, and opportunities for professional growth.

In a program that meets Minimal standards, the provider tells parents about her child care policies and parents are welcomed to visit the setting. However, the provider has difficulty juggling personal and caregiving responsibilities, and children are often left with a substitute caregiver. The provider has only limited involvement in professional development activities. In a setting that meets the Good benchmark, policies are written and the provider works cooperatively with parents, talking with parents about children's activities at least weekly. Personal and caregiving responsibilities rarely interfere with each other, and the provider regularly participates in professional development activities. To meet the Excellent benchmark providers must talk with parents on a daily basis about children's activities and parents are encouraged to participate in activities. The provider is able to coordinate personal and caregiving responsibilities, using

household activities as learning experiences for the children. Finally, the provider must be an active member of an early childhood professional group and participate in professional development programs at least four times a year.

The average score was 5.41 on the Adult Needs scale; 62% scored between Good and Excellent, and 8% met the Excellent benchmark (Figure 11). Twenty-nine percent met the Minimal standards benchmark, while only 1% failed to meet Minimal standards.

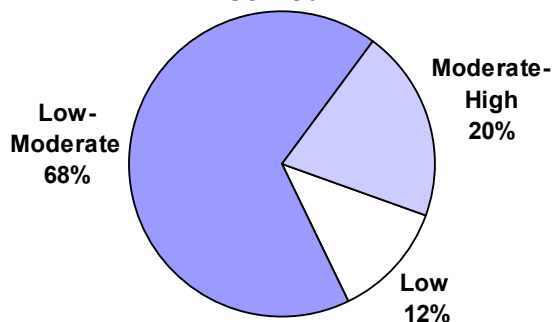
Figure 11: Percent of FCCHs Meeting Adult Needs Benchmarks



Family Income and the Quality of Family Child Care Homes

A central issue surrounding early care and education is whether low-income children attend family child care homes of comparable quality to those that serve children from higher-income families. We categorized family child care homes into three income groups. Homes serving *low-income* families were defined as those in which providers reported that at least 75% of the children came from low-income families.³ Homes serving *low-moderate income* families were those that were not classified as low-income family child care homes, but were ones in which at least 75% of the children came from low or moderate income families. Homes serving *moderate-high income* families were those in which at least 50% of the children came from moderate or higher income families with incomes over \$30,000 or 40% or more of the children came from higher income families. Four out of five providers (80%) cared for children from low-income or low-moderate income families (see Figure 12).

Figure 12: Income level of children served

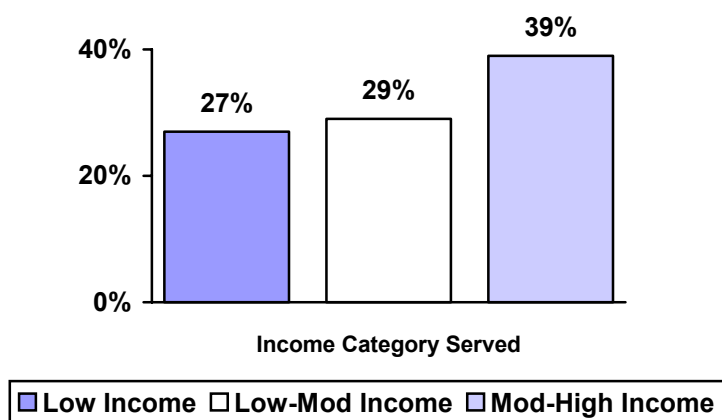


Quality and Income of Families Served. Figure 13 shows the proportion of homes

³ As guidelines, we defined “low-income” as family incomes below \$30,000 per year; “moderate income” as a family annual income between \$30,000 and \$60,000; and “high income” as a family annual income over \$60,000. Ideally, family income measures should adjust for family size; however, we did not explicitly ask providers to do so. Rather, we asked them to categorize children into broad categories, with only guidelines rather than fixed income categories.

meeting the Good benchmarks on the total FDCRS for each of the three income groups. Almost 4 out of 10 (39%) providers serving moderate- to high-income families met the Good benchmark on the Total FDCRS score, compared to only 27% of low-income providers and 29% of providers serving low- to moderate-income families. In other words, providers serving moderate-to-high income families were 1.34 to 1.44 times as likely to meet the Good benchmark as other providers. While these findings are consistent with those of other studies of family child care providers (c.f., Marshall et al 2003), the small size of the subsamples of providers serving low-income and moderate- to high-income families limits the precision of our estimates of the proportion of such providers state-wide who meet the Good benchmark and should be viewed solely as exploratory data.

Figure 13: Percent Meeting Good Benchmark by Family Income Served



Summary

Overall, approximately one-third of family child care homes met their own goals in most areas. While the vast majority of providers did a good job of meeting the needs of parents and providers, most providers did not meet the Good benchmark for space and furnishings and basic care, reflecting minimal standards of child care space, furnishings, safety and health, particularly in food preparation and diapering and toileting. In addition, while almost half provided the warm, caring relationships they valued, as many providers did not meet this goal. Similarly, 41% of providers offered the learning and stimulation they valued and children need for school readiness. However, 69% of providers did not meet the Good benchmark on Language-Reasoning, and 73% did not meet the Learning Activities Good benchmark.

When the scale scores are combined for a total FDCRS score, we found that only 30% of family child care homes met the Good benchmark overall. Fifty-six percent of the homes met the Minimal standards benchmark but did not reach the Good benchmark, and 14% were rated as less than minimal or inadequate. We found that providers serving moderate- to high-income families were slightly more likely to meet the Good benchmark (39%) compared to providers serving low-income (27%) and low-moderate (29%) income families.

While it would be preferable for more homes to meet the Good benchmark, Maine compares favorably with the Study of Children in Family Child Care and Relative Care (Galinsky, Howes, Kontos & Shinn 1994). In a study of child care in three communities in three different states (Texas, North Carolina and California), the researchers found

that only 12% of regulated family child care homes met the Good benchmark, 75% met the minimal standards, and 13% were rated as inadequate. Similar to Maine, in Massachusetts only 30 percent of FCCHs met the Good benchmark (Marshall, Creps, Burstein, Cahill, Robeson, Wang, Keefe, Schimmenti, Glantz, 2003). However, the Massachusetts study reported fewer homes (9%) providing less than minimal or inadequate care. In a study of 231 regulated family child care homes in Canada, 37% met the Good benchmark on the FDCRS, 55% met the Minimal standards benchmark, and 8% failed to meet minimal standards (Doherty, Lero, Goelman, Tougas & LaGrange 2000).

Other studies reported the average score on the FDCRS. Maine's average score was 4.26 overall. This compares to an average score of 4.39 in Massachusetts (Marshall et al 2003), 4.47 in Pennsylvania (Iutovich, Fiene, Johnson, Koppel & Langan, 1996) and 4.98 in Wisconsin (Weaver 2001). Average scores mask the distribution, but based on a comparison of Maine and Massachusetts data, the lower average score for Maine seems to reflect the higher proportion of inadequate homes, rather than a lack of higher quality homes.

The combined picture from all of these studies is that Maine is comparable to other states in the proportion of homes that meet the Good benchmark, but has slightly more homes that are judged inadequate. In addition, consistent with the national picture, a substantial portion of family child care homes provide only minimally-adequate quality for the children in their care.

Characteristics of Family Child Care Homes That Are Related to Quality

Structural Characteristics of Quality

Many structural aspects of quality can be, and in some cases are, regulated by states. Process characteristics are not easily regulated but help us understand the environments in which children spend their time, and are more directly related to children's development. To the extent that the regulatable structural indicators of quality are related to process quality—to what happens in the family child care home—regulations can improve children's outcomes. To understand how such regulatables are related to process measures, we examined the relationship between several structural variables and observed quality.

The Maine child care licensing regulations allow for homes with a single provider to care for up to four infants and toddlers, or up to eight preschoolers with two school age children, or a combination of three infants and toddlers, three preschoolers, and two school aged children.⁴ If there are two providers, there can be up to eight infants and toddlers or twelve preschoolers. For mixed aged programs with two providers, a total of 12 children can be in care with not more than 6 infants and toddlers. The provider's own children are not included in the capacity of the home, unlike in many other states. Family child care providers in Maine are not required to meet any minimum educational requirements, but they must complete 6 hours of training per year as well as CPR and First Aid education.

Group size. The average group size (number of children in the home at any one point in time) was 5.81 (minimum = 2; maximum = 13.83). One-third of homes had four or fewer children while 18% had more than eight children. On average, homes cared for one or two infants or toddlers and three or four preschoolers, on any given day. The average number of school age children was less than one.

Provider experience. While providers as a group had an average of 13 years of experience, 23% of providers had five years or less experience, while another 20% of providers had more than 20 years experience.

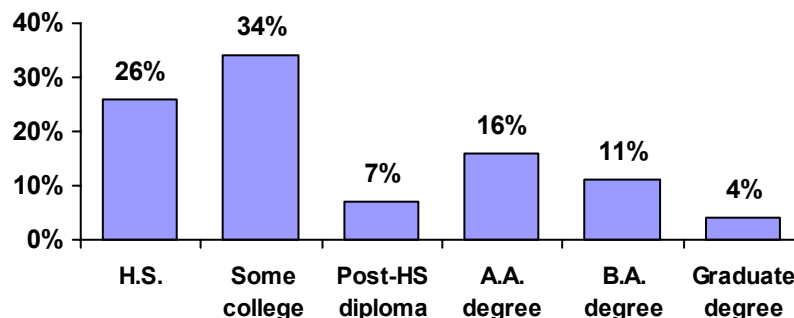
Education and training. The majority of family child care providers (72%) had some post-high school education; almost a third (31%) had an Associates degree or higher (see Figure 14). However, many of these degrees were not in child development or early childhood education.

We found that Maine providers participated in a wide variety of training and

⁴ More school age children are allowed if there are fewer preschool-children.
http://nrc.uchsc.edu/STATES/ME/me_2TOC.htm

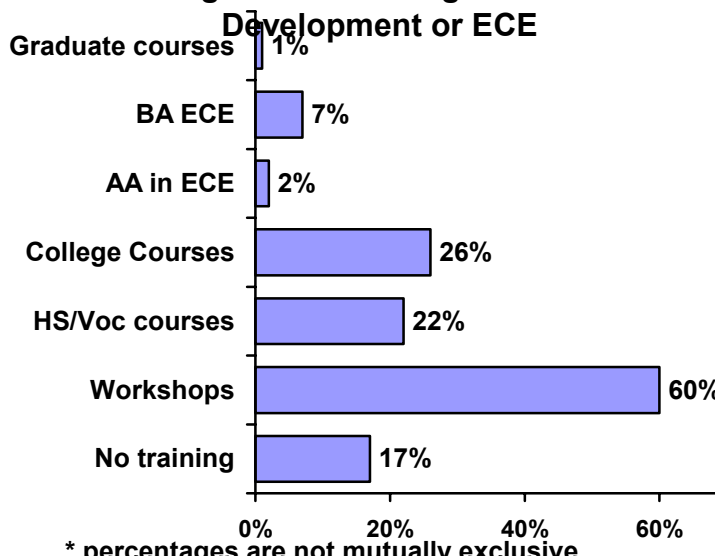
credentialing programs. Almost all providers (83%) reported participating in training in either child development or early childhood education at some point in time; 60% participated in workshops or programs in their local community or sponsored by a professional organization (see Figure 15).

Figure 14: Provider Education



When we examined the combination of trainings and certifications beyond the level of workshops, we found that 49% of all providers had either a credential, training in the field other than workshops, or a degree in child development or early childhood education. For example, 22% reported high school courses or vocational training, 26% of providers reported taking college level child development courses, but had no degree; and 10% had an Associates degree or higher education in the field. We asked a separate question about credentials and found that 4% of providers had a CDA (Child Development Associate), 7% had a public school teaching certificate (active or expired), 2% held Family Child Care Accreditation from NAFCC (National Association for Family Child Care), 3% held Home Start certification, 1 provider held a Certificate of Quality and 1 provider had a MRTQ certificate. Note that some providers had more than one credential or formal education in the field combined with a credential. However, over half of all providers (51%) had no training other than workshops and no education or coursework in the field.

Figure 15: Training in Child Development or ECE



Providers were asked if they had experienced any problems in getting additional training as family child care providers. One third (32%) reported no problems. The greatest problem area for the other providers was scheduling, with 50% reporting that training was scheduled at difficult times, and 30% reported that they had no time for additional training. Only 7% of providers reported that training was too far away for travel. Other problem areas included: cost too high (21%);

quality of training available is poor (16%); not enough training offered (14%); no pay-off for additional training (13%).

The Relationship between Structural Quality and Process Quality

Table 8 reports the extent to which variations in each of these structural variables is associated with variations in the observed quality of family child care in Maine. To simplify these analyses, we calculated two composite process quality variables, based on Table 7, above, which described the links between providers' goals and the process measures used in this study. "Learning & Stimulation" is the sum of two FDCRS subscales: Learning Activities and Language and Reasoning. "Warmth & Sensitivity" is the sum of the FDCRS subscale, Social Development, and the Sensitivity subscale of the Global Caregiving Rating Scale. These measures are described above, and in Appendix A.

Reading the tables. Because the estimates are standardized, they can be compared to each other, both within each model and across models. The table also reports the significance level (p) of each estimate—that is, the probability that the relationship that is found is an artifact of the particular sample of homes that were chosen for this study, rather than representing the true relationship among structural variables and process quality in all family child care homes in Maine.⁵ Finally, the table reports the R^2 for each model; R^2 is the proportion of the variation in the process quality measure that is explained by all of the listed structural quality variables combined.

Table 8: Standardized Estimates of Relationships Between Structural and Process Quality Measures

	Learning & Stimulation	Warmth & Sensitivity	FDCRS
Group size	-.15	-.17	-.07
Experience	.17	.08	.15
Ed/Training in field	.30*	.27*	.26*
R2	.14**	.10*	.10*

[^] $p < .10$; * $p < .05$; ** $p < .01$

Learning & Stimulation. First, we examined the relationships between the structural variables and the quality of learning and stimulation provided in the family child care home. As described above, the Learning & Stimulation composite is a measure of the amount and variety of activities available to the children, the developmental appropriateness of the environment, the use of language in the setting, and the opportunities for learning about language. Higher scores signify more stimulating

⁵ For example, an estimate that is significant at the $p < .05$ level has five chances out of 100 of being due to chance. Put another way, that same estimate has 95 chances out of 100 of representing the true value for all Maine family child care homes. In this report, we treat as significant those estimates that have at least 95 chances out of 100 of being valid ($p < .05$); p values $< .10$ are interpreted as marginally significant.

homes. As Table 8 shows, providers with more education or training in the field provided significantly higher levels of age-appropriate learning and stimulation for the children.

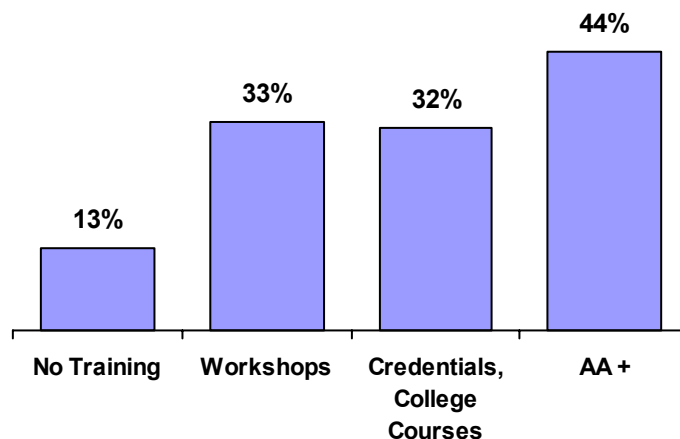
Warmth & Sensitivity. Warmth & Sensitivity describes how providers interact with the children in the family child care home, how warm they are with the children, the amount and types of interactions that occur and the quality of those interactions, and how sensitive providers are to children's needs. As with Stimulation, provider education or training in the field was the only structural measure related to Warmth & Sensitivity (Table 8). In homes where providers had more education or training in the field, the interactions between providers and children were warmer and more frequent, and providers were more sensitive to children's needs.

Global Quality. Finally, we examined the relationship between the structural variables and the more general measure of quality—the total score on the FDCRS (Table 8). The total score on the FDCRS takes into account the physical quality of the setting (physical space, health and safety, materials available for the children), the routines and schedules put in place by the provider, as well as the learning opportunities available for children, and the nature of the interactions between providers and children. As with the other measure of process quality, provider education was significantly related to the FDCRS Total. Providers with more education or training in the field provided care that was generally significantly higher-quality compared to providers with less education or training.

Provider Training and Quality. As Table 8 shows, provider education or training in the field was a consistent, significant indicator of higher quality care provided in a family child care home. We grouped providers into four levels of education and training – (1) no education or training in the field, (2) workshops in the field; (3) a credential, such as a CDA, or college courses, but not an Associates degree or higher; (4) an Associates degree or more education in the fields of early care and education or child development – and then compared these groups on the Total FDCRS scores (Figure 16).

We found that providers with formal education in the field (an Associates degree or higher) were more than 3 times as likely as providers without training to meet the Good benchmark. Providers who have taken a workshop, held a credential such as a CDA or had taken one or more college courses in the field were 2.5 times as likely to meet the Good benchmark as providers without training.

Figure 16: Percent Meeting Good Benchmark by Education and Training in the Field

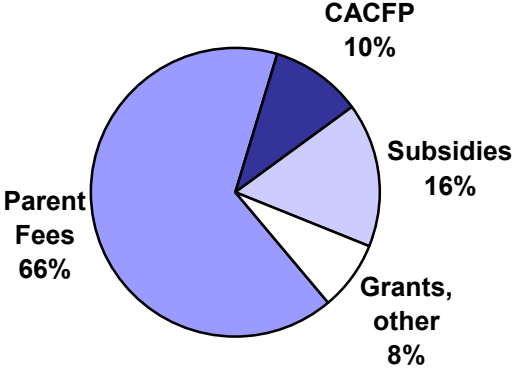


The Cost of Early Care and Education in Maine's Family Child Care Homes

Revenue Sources

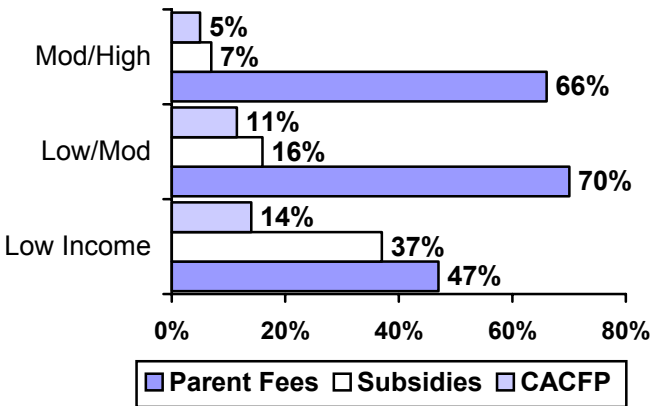
Maine's system of family child care providers received revenues from multiple sources; including parent fees, the Child and Adult Care Food Program (CACFP), subsidies (e.g., DHS subsidies, Home Start subsidies, ASPIRE/TANF or employer subsidies) and grants or other sources. All providers received revenue from parent fees, 63% received revenue from one or more subsidies, 81% of providers participated in CACFP, and 11% of providers received revenue from grants or other sources. Across all providers, parent fees were the single most important source of revenue, accounting for almost two-thirds of the revenue for family child care (Figure 17). On average, providers received \$34,337 per year, across all revenue sources.

Figure 17: Revenue Sources



Revenue Sources by Income of Families Served. Revenue sources varied by the income level of families served (see Figure 18)⁶. Providers serving moderate- and high-income families, and providers serving low- and moderate-income families, received most of their revenues from parent fees (66% and 70%, respectively, from parent fees). In contrast, providers who served predominantly low-income families received only 47% of revenues from parent fees. The majority of revenue to these providers came from a combination of subsidies and CACFP funds.⁷

Figure 18: Sources by Income Served

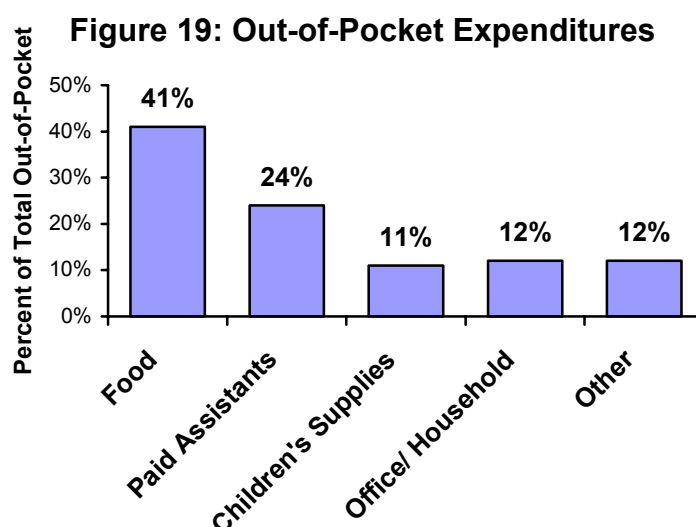


⁶ Because so few providers received grants or other funds, averages by income groups would be misleading. Therefore, we have excluded revenues from grants and other sources from Figure 18.
⁷ Revenues are highest among providers who served higher income families; average revenues were 1.4 times higher for providers serving moderate- and higher-income families, compared to revenues for

Costs

Just like any other business, family child care homes have out-of-pocket expenditures, as well as occupancy⁸ and labor costs, in addition to out-of-pocket expenditures.

Out-of-pocket expenditures. Out-of-pocket expenditures were about \$13,662 per year, on average. The bulk of these expenditures (41%) were for food (Figure 19); paid assistants accounted for 24% of expenditures. The remaining expenses were shared somewhat evenly between children's supplies (e.g., toys, art materials), office and household supplies (e.g., paper towels, copying, postage), transportation, training, organization dues, and other expenses (diapers, start-up equipment (computers, cribs, climbers)).



Occupancy costs. Because family child care is a home-based business, and the provider is self-employed, we often think of the costs associated with family child care as limited to food, supplies, perhaps a paid assistant or paid training. However, family child care homes, like any other business, can not operate without a physical space. While many people do not view the use of the provider's home as a business expense, the IRS recognizes it as such, and economists also try to account for the cost of this space (occupancy costs) when describing the costs associated with a family child care business (or any other home-based business).

It is important to consider occupancy costs as true costs for several reasons. Providers have often spent cash to improve the space specifically for the family child care business. More importantly, the space used for the family child care business is not available for other purposes – it cannot be rented out, and it cannot be used for family purposes without considering the family child care use of the space. Finally, if we as a society wish to expand the supply of family child care homes, one of the costs of doing so is the cost of space. However, assigning a dollar value to occupancy costs in a family

providers serving predominantly low-income and low-to-moderate-income families. However, if we exclude revenues from grants and other funds, the revenues of providers serving higher-income families are only 1.1 times greater than the revenues of other providers.

⁸ Occupancy costs include the allocated costs of housing (mortgage, rent) as well as maintenance and repairs, utilities and other related expenses.

child care home is difficult. The provider does not usually rent space for the sole purpose of running a business; rather, occupancy costs are those associated with the provider's own home. The Technical Appendix explains in detail how we estimated occupancy costs in this study.

We estimated that the average yearly occupancy costs for family child care providers in Maine were \$4,982. This value reflects the cost to the provider of using a portion of the home for the family child care business.

Labor costs. There are many ways to think about the wages of family child care providers. Labor costs are difficult to estimate because providers do not draw a salary from their business. In this section, we focus on what the provider actually earns as a family child care provider, not on her potential earning power in other occupations. However, even earnings are not straightforward to estimate. Often, providers think of their revenues as their earnings; however, providers incur out-of-pocket expenses that reduce their income. Using this logic, we would consider net revenues as an estimate of providers' wages. Net revenues (total revenues minus out-of-pocket expenses) average \$20,537 among Maine providers.

However, net revenues do not consider occupancy costs, which we have argued must be considered as reducing the "profit" a provider makes from her child care business. If we include occupancy costs, the average net revenues for providers becomes \$15,692 per year, or \$5.66 per hour.⁹

Full Costs. Other costs associated with family child care are not borne by the family child care provider, such as costs of administering subsidies, the Child and Adult Care Food Program (CACFP) and the value of donated equipment. These "social costs," or costs paid by a third party, such as the taxpayer or a charity, should be considered when calculating the full costs of providing family child care.

Almost half (46%) of all family child care providers received donated equipment, toys, or other free materials for the family child care business. Had the providers not received these donations, they would have needed to purchase this equipment and materials to provide the same service; therefore, we consider the value of donations to be an estimate of part of the full cost of providing family child care. On average, providers received \$88 in donated goods per year, a negligible increase over total costs.¹⁰

The CACFP program provides reimbursements to both family child care providers and to sponsoring organizations, and 82% of the providers participated in CACFP.

⁹ Based on providers' average work year of 49 weeks per year and the average work week of 60 hours per week. We calculated net revenues for each provider and then took the mean of these individual values to obtain our \$5.66 per hour figure. Given the considerable variation in both out-of-pocket expenditures and occupancy costs, this value is slightly different from, but more valid than, that generated using only sample mean values for revenues and expenditures. See the Technical Appendix for a discussion of labor costs for use in our economic models.

¹⁰ Across all providers, the total cost per child care hour was increased by less than one cent when donations were included.

Participating family child care providers are subsidized to help pay for meals and snacks and CACFP sponsoring organizations are reimbursed by the federal government for activities, such as training providers in CACFP requirements, determining reimbursement tiers, monitoring compliance, submitting claims, and distributing reimbursements. These CACFP provider - and sponsor - reimbursements should be counted as part of the full cost of providing family child care. Had the sponsor not covered these costs, the family child care provider may have worked additional hours to enable her to participate in CACFP – as is indeed the case for self-sponsoring child care centers.

CACFP administrative costs are part of the total cost for child care, separate from the provider’s total labor and non-labor costs, since these are costs incurred by the taxpayer.¹¹ We estimated these costs at \$44 per month (\$528/year), the amount that sponsoring organizations were reimbursed,¹² since in equilibrium we would expect costs to be closely related to the level of reimbursement.

Theoretically, it is important to include all costs - including those not borne by the provider - when examining the total cost associated with family child care. While the absolute value of administrative costs is also important, the administrative costs and donations paid by third parties accounted for only a small portion – less than 2% -- of the total cost of family child care.

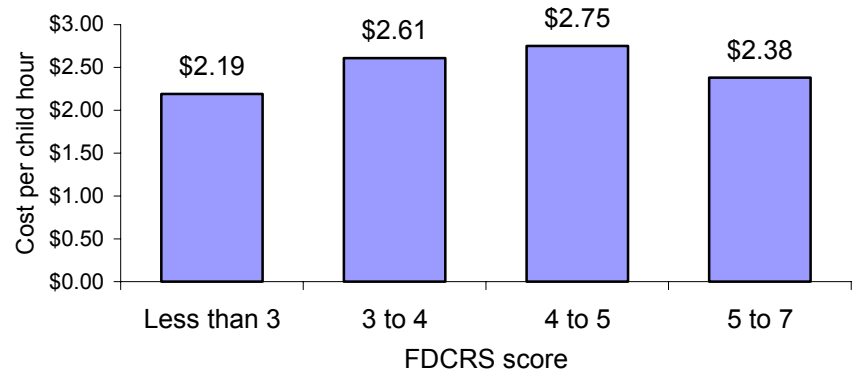
The Relationship between Quality and Costs

We calculated the mean total cost¹³ for providers in each of four quality categories – those with total FDCRS scores below the Minimal benchmark

(less than a 3); those with scores between 3 and 4; those with scores between 4 and less than 5; and those meeting or exceeding the Good benchmark, with a score of 5 or greater (Figure 20). To compare homes that varied in number of

children in care, and number of hours of care provided, we converted all cost figures to a standard unit – cost per *child care hour*. One child care hour is defined as one hour of care provided to one child. If a provider cares for six children for 10 hours, that is the

Figure 20: Mean cost by FDCRS score



¹¹ CACFP participation may also increase other expenses, such as office supplies, and the total number of hours worked, but for simplicity we assume that these effects are negligible.

¹² Federal Register, vol. 66, no. 124, Wednesday, June 27, 2001, notices, p. 34145.

¹³ See the Technical Appendix for an explanation of the calculation of total cost.

equivalent of 60 *child care hours* of care.

We found that total costs per *child care hour* increased monotonically with FDCRS scores up to 5.0. Providers who failed to meet the Minimal quality benchmark had average costs per child care hour of \$2.19, this increased to \$2.61 per child care hour for providers who met the Minimal benchmark, and to \$2.75 for providers who exceeded the Minimal benchmark but did not meet the Good benchmark. At these lower levels of quality, there appears to be a rise in costs as quality increases. However, providers with FDCRS scores above 5.0 had *lower* costs than their counterparts with lower scores. This was true for both labor and non-labor costs. However, the apparent non-linear relationship between quality and cost did not reach statistical significance in this sample (see the Technical Appendix for details on this analysis). While this analysis describes the observed relationship between cost and quality in this sample, we can not comment on causality with the available data.

Summary

On average, family child care providers in Maine received \$34,337 per year in revenues. The majority (66%) of revenues came in the form of parent fees. Other sources of revenue included subsidies (16% on average), payments from reimbursement from the CACFP program (10%), and grants or other funds (8% on average).

However, revenue sources varied by the incomes of families served. Providers who served moderate and higher income families received a greater share of their revenue directly from parent fees (70% and 67% respectively), compared to only 47% of revenues for providers serving low-income families. Subsidies and CACFP played a significant role among providers serving low-income families, accounting for the majority of the revenue for those providers, compared to 27% of revenues for low-moderate income providers and 12% of revenues for higher-income providers.

Providers' costs included out-of-pocket expenditures, occupancy and labor costs. The largest out-of-pocket expense was food, followed by paid assistants; out-of-pocket expenditures averaged \$13,662 per year. Occupancy costs were estimated at \$4,982. Providers' net revenues after considering out-of-pocket expenditures averaged \$20,537; if occupancy costs are deducted, net revenues averaged \$15,692 per year.¹⁴

When considering the full costs of family child care, we examined costs borne by third parties, such as donations or administrative fees associated with subsidies. These costs had only a slight impact on the total cost of family child care.

¹⁴ These average net revenues are calculated for each individual provider and then averaged over all providers; as a result of individual variations in the balance of out-of-pocket expenditures, occupancy costs and revenues, the average net revenues are not exactly equal to average total revenues minus average expenditures and average occupancy costs.

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Technical Appendix A: Methodology, Measures, and Calculating Costs

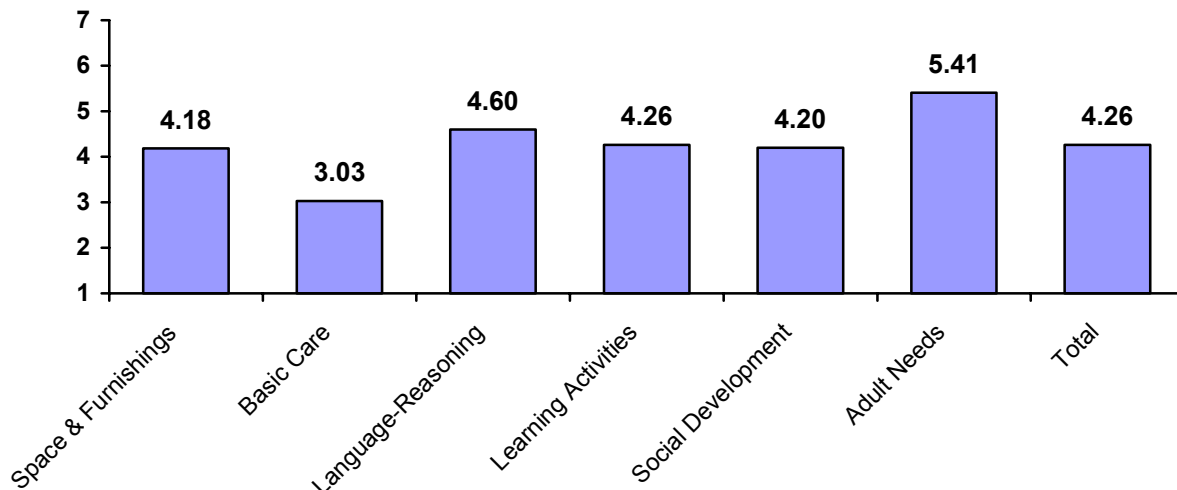
Observational Measures Used in This Study

Group Size. While interviews can give us information on the group size that a home strives for, observations give us information about actual group sizes. Over the course of the observation, observers counted the number of children and adults present every twenty minutes, for a minimum of six observations. This information is used to calculate an average observed group size for each home.

Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989). The FDCRS is an adaptation of the Early Childhood Environment Rating Scale (ECERS), designed to be used in family child care settings for children under six years of age. The 32 items cover the following scales: Space and Furnishings for Care and Learning, Basic Care, Language and Reasoning, Learning Activities, Social Development, and Adult Needs. Observers make their ratings based on three to four hours of observation in a FCCH, and the ratings are considered descriptive of the care in that setting for the group of children as a whole. Each observer in the present study conducted reliability visits with at least three other observers. Inter-rater reliabilities for the present study ranged from .74 to .91, with an average reliability of .81

The overall average score for Maine family child care homes was 4.26 (Figure 21). On only one scale, Adult Needs, was the average score at or greater than 5. On the Basic Care subscale, the average was 3. The average scores for the other subscales fell below 5.

Figure 21: Average Subscale and Total FDCRS Scores



Global Caregiving Rating Scale (Arnett, 1989). This scale measures caregiver involvement and teaching style with children and is based on the entire observation period. The 26 items are rated on a four-point scale from “not at all characteristic of the

caregiver” to “very much characteristic, ” and cover four areas -- sensitivity, harshness, detachment, and permissiveness. A total score was constructed from the items. Inter-rater reliabilities for the present study ranged from .69 to .92, with an average reliability of .77.

Calculating Costs

In this Technical Appendix, we describe our method of measuring occupancy and labor costs for family child care providers, and then estimate an average total cost per child-care-hour among family child care providers in Maine.

Occupancy costs. We estimated that the average yearly occupancy costs for family child care providers in Maine were \$4,982. This value reflects the cost to the provider of using a portion of the home for the family child care business. Occupancy costs are an accepted component of the costs of doing business. In family child care homes, many providers do not think of their housing costs as part of the cost of doing business, unless they take the tax deduction for business use of their home allowed by the Internal Revenue Service. However, it is important to consider occupancy costs as true costs for several reasons. Providers have often spent cash to improve the space specifically for the family child care business. More importantly, the space used for the family child care business is not available for other purposes – it cannot be rented out, and it cannot be used for family purposes without considering the family child care use of the space. Finally, if we as a society wish to expand the supply of family child care homes, one of the costs of doing so is the cost of space.

Estimating occupancy costs. Annual occupancy costs are estimated based on the value of the provider’s home, the fraction of space that is used for the family child care business, and the fraction of time that the space is used, following the guidelines of the Internal Revenue Service. Each of these components is discussed below.

If the provider is renting the family child care home, the annual cost of the home is equal to what the provider pays in rent, plus repairs and utilities. If the provider owns the home, the annual cost of the home is calculated based on an implicit rental value, estimated to be 12% of the value of the home. This fraction of the home value accounts for interest, taxes, depreciation, and capital gains. Implicit rent for an owned home can be approximated as $R = (i + T + d - g + e) \times V$, where V is the value of the home, i is the interest rate, T is the tax rate, d is the rate of depreciation and maintenance, g is the rate of expected capital gains, and e is a measure of effort recognizing that management of a home for the purpose of running a family child care business requires some level of entrepreneurship (Mills and Hamilton, *Urban Economics*, 4th ed., 1989). Note that this formula assumes each of these components is proportional to the value of the home.

The value of the home is based on the provider’s assessment of its “fair market value.” Imputed amounts for home value were used for providers who did not report a fair market value for their home. The imputed value was based upon the purchase price of the home, the year the home was purchased, the amount of repairs made to the home, if any, and the year(s) in which the repairs were made.

All space in the home is characterized as either dedicated space, which is used solely for the family child care business; shared space, which is used both by the provider's family and the family child care business; or private space, which is used exclusively by the provider's family. The proportion of the home that is used for child care may be calculated based either on square footage or on the number of rooms. For greater precision we use square footage. Kitchens and bathrooms are excluded as these are deemed to be "common space," and their costs are allocated proportionately. On average, dedicated space and shared space accounted for 10% and 39% of the provider's home, respectively. About half of the provider's home was designated as private space, on average, and was not included in the calculation of occupancy cost.

When calculating occupancy costs, the cost of dedicated space, i.e., rooms that are used exclusively for the child care business, is included in its entirety. The cost of shared space in the home is prorated to exclude the amount of time this space was available to the family, depending on hours of operation. If the family child care business was operating for 40 hours per week and was available to the family for the remaining hours, we would include as occupancy costs $(40 / 168) = 24\%$ of the value of the shared space. On average, shared space is used for the family child care business about one third of the time.

It could be argued that the shared space would not be used by the family during sleeping hours. When we exclude eight sleeping hours per day from the denominator, the time percentage for shared space is increased to 55%. In our calculations, we assume the family has access to shared space during all non-business hours (i.e., we include sleeping hours). The sum of the dedicated and shared space costs is equal to the total annual occupancy cost.

Labor costs. The average hourly wage among Maine family child care providers was \$5.94, or about \$18,500 annually based on a 60-hour work week, the average number of hours worked per week for these family child care providers. Working hours include both hours of operation and other time spent doing shopping, cleaning, laundry, and paperwork.

Estimating providers' wages. There are many ways to think about the wages of family child care providers. We focus on what the provider actually earns as a family child care provider, not on her potential earning power in other occupations. However, even earnings are not straightforward to estimate. Often, providers think of their revenues as their earnings; however, providers incur out-of-pocket expenses that reduce their income. In addition, we have argued that it is important to consider occupancy costs as reducing the "profit" a provider makes from her child care business. In the body of the report, we have presented calculations of net revenues that consider both out-of-pocket expenses and occupancy.

For our economic models, we also needed to adjust labor costs for other factors. In estimating labor costs, we considered child care for the provider's own children. For accounting purposes, child care for the provider's own children is included as an implicit cost, since the provider would have had to put the child in care had she taken other

employment. It is an *implicit* cost because the provider pays herself. This payment is also counted as revenue, though, along with total revenue from all other children in care. That is, the family child care provider is both paying herself for the care of her own child and including the cost of care as a part of total cost. Although this accounting procedure for the provider's own children constitutes a wash in the effective wage calculation, the inclusion of child care hours associated with the provider's own children affects the measure of total child care hours, and affects all measures of cost given in terms of child care hours.

Revenues and total hours worked are adjusted to account for the provider's holiday, vacation, and sick time and training. Revenues and total hours are also adjusted in instances where fees are not collected or are only partially collected when a child is out sick or on vacation. Finally, pre-paid child care is counted as revenue when calculating the effective wage, even if it is partly unused, whereas the actual number of hours that the child was in care is counted towards the total number of child care hours when calculating total cost per child care hour.

We considered all of these factors in choosing to use the providers "effective wage" in our report. The provider's "effective wage" is equal to her gross income from child care minus the incurred costs of providing the child care, divided by the total hours that she works. An alternative method of estimating labor costs would be to assign a wage to the provider based on local wage rates in similar occupations. Drawbacks of this method are that it requires a reliable estimate of local wage rates, and an appropriate job classification that matches family child care providers. In addition, using wages from other occupations does not take into account some of the non-pecuniary benefits of being a family child care provider, such as spending time with one's own children or not having to commute to work. Although not ideal, we believe the effective wage is a superior method of measuring labor costs in economic models.

By deeming the effective wage to be a labor cost, we are assuming in effect that potential child care providers assess the attractiveness of the occupation based on net revenue per hour worked.

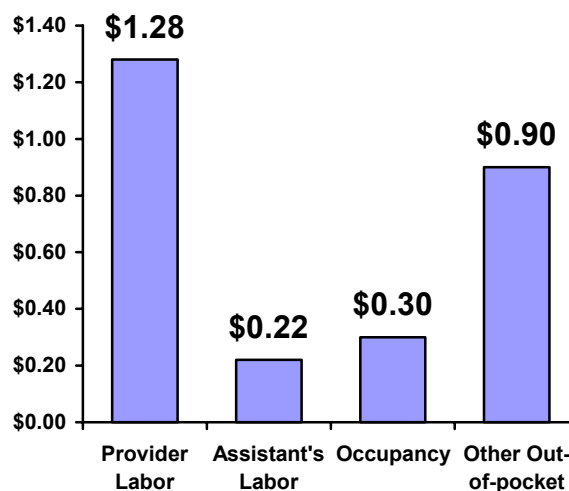
Total Cost. Because providers' absolute costs vary with the number of children in their care, among other factors, we needed to convert our cost estimates to a common unit – we chose to compute costs on a per child care hour basis.¹⁵ Total cost per child care hour was computed by taking the effective wage multiplied by total hours of work plus the total of non-labor costs, and dividing this sum by the number of child care hours provided. It is no coincidence that the total cost to the provider is equal to the provider's revenue; total labor costs, calculated via the "effective wage," were equal to revenues minus non-labor cost. The three-cent difference between total revenue and total cost was due to rounding. The average total cost per child care hour across all providers was \$2.70. Labor costs for providers, as measured by the "effective wage", were \$1.28 per child care hour and accounted for half (47%) of total costs. Labor costs associated with paid assistants accounted for only 8% of total costs. Occupancy costs and out-of-pocket

¹⁵ One child care hour is equal to one hour of care provided to one child. If a provider cares for six children at a time, in one hour she provides six child care hours of care (six children times one hour = 6 child care hours).

expenditures accounted for about 44% of total cost.

The Relationship between Quality and Cost. We found that total costs per *child care hour* increased monotonically with FDCRS scores up to 5.0. Providers who failed to meet the Minimal quality benchmark had average costs per child care hour of \$2.19, this increased to \$2.61 per child care hour for providers who met the Minimal benchmark, and to \$2.75 for providers who exceeded the Minimal benchmark but did not meet the Good benchmark. At these lower levels of quality, there appears to be a rise in costs as quality increases. However, providers with FDCRS scores above 5.0 had *lower* costs than their counterparts with lower scores. This was true for both labor and non-labor costs.

Figure 22: Costs per Child Care Hour



However, the apparent relationship between quality and cost did not reach statistical significance in this sample. Using multiple regression techniques, we regressed cost on the linear component of quality (total FDCRS score), plus a quadratic term for the non-linear component of quality ($FDCRS^2$), plus region of the state, where 1 = densely-populated counties in the southern portion of the state, and 0 = less densely-populated counties in the interior and northern portions of the state. We included region in the model as a control for differences in labor markets, real estate values, and child care markets, among other factors. The overall F test was significant ($F=2.98$ $p=.04$ $df=3, 85$; $R^2=.095$). However, when we examined the individual estimates of the predictors, only region was significantly different from zero (region: $t=2.22$ $p=.02$; FDCRS: linear $t=1.11$, $p=.27$; FDCR quad: $t=1.05$, $p=.29$). With a larger sample, we would have more precise estimates of cost and quality, and more power to test this relationship; we might then find that the relationship between quality and cost is significant. In fact, in a study of 200 family child care homes in Massachusetts, we found that the relationship between quality and cost was linear – cost increased as quality increased. In addition, we found that the quality of licensed family child care was significantly related to the cost of family child care; the relationship could not be explained away by confounding factors such as differing operating characteristics, the income of families served, or provider education.